

**Translation**

**PATENT COOPERATION TREATY**

PCT/JP2003/013792



**PCT**

**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P04644900	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP2003/013792	International filing date ( <i>day/month/year</i> ) 28 October 2003 (28.10.2003)	Priority date ( <i>day/month/year</i> ) 29 October 2002 (29.10.2002)
International Patent Classification (IPC) or national classification and IPC C08L 23/00, C08K 7/02, 5/54, 3/36, C08J 5/04		
Applicant YAZAKI CORPORATION		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of _____ sheets.</p>
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>

Date of submission of the demand 18 May 2004 (18.05.2004)	Date of completion of this report 21 October 2004 (21.10.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP2003/013792

## I. Basis of the report

### 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☐ the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the claims:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, as amended (together with any statement under Article 19  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the drawings:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

### 5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/JP 03/13792

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims		YES
	Claims	1-18	NO
Inventive step (IS)	Claims		YES
	Claims	1-18	NO
Industrial applicability (IA)	Claims	1-18	YES
	Claims		NO

### 2. Citations and explanations

#### (1) Citations

The following documents are cited in the international search report.

Document 1: JP 63-179945 A (Ube Ind., Ltd.), 23 July 1988

Document 2: JP 11-302464 A (Ube Ind., Ltd.), 02 November 1999

Document 1 discloses a reinforced rubber composition that comprises 100 parts by weight of an ethylene/propylene/diene copolymer rubber, 2-100 parts by weight of fine thermoplastic polyamide fibers, 0.2-5.0 parts by weight of a silane coupling agent, and 300 parts by weight or less of an inorganic filler agent such as silicic anhydride or silicic hydride (claims 1 and 2; page 4, lower right column, lines 7-9; and page 4, lower right column, line 18 to page 5, upper left column, line 3); indicates that the fine thermoplastic polyamide fibers exhibit an average diameter of 0.05-0.80µm and a fiber length of at least 10µm, and that 90% by weight or more of the fibers in question exhibit a length of 1,000µm or less (page 3, lower right column, lines 7-13); and presents a

method for the production of the reinforced rubber composition in question (page 5, upper right column, line 15 to lower right column, line 16).

Document 2 discloses a polyamide fiber-reinforced polyolefin resin composition that comprises (a) 90-99 parts by weight of the polyolefin(s), (b) 1-10 parts by weight of the polyamide fibers and (c) a silane coupling agent (wherein, (a) + (b) = 100 parts by weight) (claim 1); discloses a feature wherein the polyamide fibers exhibit an average fiber diameter of 1µm or less and an aspect ratio of at least 20 but not more than 1,000 (claim 2); indicates that it is acceptable for the composition in question to contain white carbon or the like (paragraph [0026]); and presents a comparative example (2) that comprises (a) 80 parts by weight of the polyolefin(s) and (b) 20 parts by weight of the polyamide fibers (paragraphs [0028] to [0032] and table 1).

## (2) Novelty

The "ethylene/propylene/diene copolymer rubber," the "fine thermoplastic polyamide fibers," the "silane coupling agent" and the "silicic anhydride or silicic hydride" that are disclosed in document 1 correspond to the "polyolefin(s)," the "polyamide fibers," the "silane coupling agent" and the "silica particles" that are set forth in claims 1 to 18, and the loads of each of these components overlap. In addition, there is no difference between the methods for mixing the components from the inventions in question.

Consequently, the inventions that are set forth in claims 1 to 18 are disclosed in document 1.

The "(a) polyolefin(s)," the "(b) polyamide fibers," the "(c) silane coupling agent" and the "white carbon" that are disclosed in document 2 correspond to the "polyolefin(s)," the "polyamide fibers," the "silane

coupling agent" and the "silica particles" that are set forth in claims 1 to 18. In addition, there is no difference between the methods for mixing the components from the inventions in question.

Consequently, the inventions that are set forth in claims 1, 2, 4, 5, 6, 7, 8, 9, 13, 14, 15, 16, 17 and 18 are disclosed in document 2.

As a result, claims 1 to 18 lack novelty.

(3) Inventive Step

Claims 1 to 18 lack novelty; therefore, they do not involve an inventive step.

In addition, claims 3, 10, 11 and 12 specify the load of the silica particles, whereas document 2 does not specify the load of the "white carbon," which corresponds to the silica particles. However, the white carbon that is disclosed in document 2 is an optional component, and as such it would be easy for a person skilled in the art to set the load thereof.